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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/771,977	01/30/2001	Harry van der Pol	040010-937	9429

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EXAMINER	
LE, LANA N	

ART UNIT	PAPER NUMBER
2685	

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/771,977	POL, HARRY VAN DER	
	Examiner	Art Unit	
	Lana Le	2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 January 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,10-23 and 25-30* is/are rejected.

7)☒ Claim(s) *8-9, 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-7, 10, 11-13, 14, 18, 20-23, 25, 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Johnson (US 4,031,469).

Regarding claim 1, Johnson discloses a method for calibrating one or more amplifiers 50 characterised in:

i) generating a noise signal (calibrating signal) produced by the one or more amplifiers 50 when no input signal from antenna (fig. 2 and hereafter) is connected (switch 64 connected to 68) to at least one amplifier of the one or more amplifiers 50 (col 3, lines 20-62); ; and

ii) using the noise signal as a calibrating signal for estimating a corresponding gain (G) of the one or more amplifiers 50 by measuring at 60 at least one output of the one or more amplifiers 50 the amount of noise of the one or more amplifiers 50 (col 4, lines 5-14).

Regarding claim 2, Johnson further discloses a method for calibrating one or more amplifiers 50 according to claim 1, wherein the gain (G) is further adjusted in accordance with the calibrating signal (col 4, lines 18-26).

Regarding claim 3, Johnson further discloses a method for calibrating a receiver generating a noise signal produced by one or more amplifiers 50 of the receiver when an input signal is disconnected (switch 64 to 68) from the receiver (col 3, lines 20-62); and

ii) using the noise signal as a calibrating signal for estimating a corresponding gain (G) of the one or more amplifiers in the receiver by measuring 60 at the output of the receiver the amount of noise of the one or more amplifiers 50 (col 4, lines 18-26).

Regarding claim 4, Johnson further discloses a method for calibrating a receiver according to claim 3, wherein the gain is further adjusted in accordance with the calibrating signal (col 4, lines 18-26).

Regarding claim 5, Johnson further discloses a calibration arrangement (Fig. 2) comprising:

one or more amplifiers 50 for amplifying a radio signal;

estimating means 60 for estimating a gain of the one or more amplifiers 50; disconnecting the radio signal at antenna while at least one amplifier of the one or more amplifiers 50 is producing a calibrating signal as a reference signal into the estimating means (60) for estimating the gainof the radio signal (col 4, lines 15-26).

Regarding claim 6, Johnson further discloses a calibration arrangement (fig. 2) comprising:

one or more amplifiers 50 for amplifying a radio signal from antenna;

estimating means (60) for estimating a gain of the one or more amplifiers 50 (col 3, lines 49-54);

wherein the calibration arrangement further comprises:

a switching means (64) for disconnecting the radio signal while at least one amplifier 50 of the one or more amplifiers 50 is producing a calibrating signal as a reference signal into the estimating means (60) for estimating the gain of the radio signal at antenna (col 4, lines 15-26).

Regarding claim 7, Johnson further discloses a calibration arrangement (fig. 2) according to claim 5, wherein the calibrating signal is a pure noise signal of at least one amplifier of the one or more amplifiers 50 (col 4, lines 10-23).

Regarding claim 10, Johnson further discloses a calibration arrangement according to claim 5 wherein disconnecting the one or more amplifiers 50 from the radio signal at antenna by connecting at least one input of the one or more amplifiers 50 to a reference potential via 68 to ground.

Regarding claim 11, Johnson further discloses a calibration arrangement according to claim 6 wherein the switching means is disconnecting the one or more amplifiers 50 from the radio signal at antenna by connecting at least one input of the one or more amplifiers 50 to a reference potential ground via 68.

Regarding claim 12, Johnson further discloses a calibration arrangement according to claim 10 wherein the reference potential is provided by a resistance at 68 connected to ground.

Regarding claim 13, Johnson further discloses a calibration arrangement according to claim 5 wherein Johnson further discloses the calibration arrangement further comprises: more than one amplifier 48 and 50 in a chain for amplifying the received radio signal at antenna (fig. 2).

Regarding claim 14, Johnson further discloses a calibration arrangement according to claim 6 wherein the switching means (64) is disconnecting the one or more amplifiers 50 from the radio signal at antenna by disconnecting at least one input of the one or more amplifiers 50 which is closest to an input of the radio signal at 66.

Regarding claim 18, Johnson further discloses a calibration arrangement (fig. 2) according to claim 5 wherein the gain of the radio signal is estimated from the calibrating signal when an output signal is measured at at least one output of the one or more amplifiers 50 (col 4, lines 5-12).

Regarding claim 20, Johnson discloses a receiver (fig. 2) comprising: means for receiving a radio signal one or more amplifiers 50 for amplifying the received radio signal;

estimating means (60) for estimating a gain of the receiver (col 3, lines 49-54);

wherein the receiver further comprises: a switching means 64 for disconnecting the received signal while at least one amplifier of the one or more amplifiers 50 is producing a calibrating signal as a reference signal to the estimating means (60) for estimating the gain of the radio signal from antenna (col 4, lines 15-26).

Regarding claim 21, Johnson further discloses a receiver (fig. 2) according to claim 20, wherein the calibrating signal is a pure noise signal of at least one amplifier of the one or more amplifiers 50 (col 2, lines 1-4).

Regarding claim 22, Johnson further discloses a receiver (fig. 2) according to claim 20 wherein the switching means (64) is disconnecting the radio signal by connecting at least one input of the one or more amplifiers (50) to a reference potential via 68 to ground.

Regarding claim 23, Johnson further discloses a receiver (fig. 2) according to claim 22, wherein the reference potential is provided by a resistance at 68 connected to ground.

Regarding claim 25, Johnson further discloses a receiver according to claim 20 wherein Johnson further discloses the receiver further comprises: more than one amplifier 48 & 50 in a chain for amplifying the received radio signal.

Regarding claim 29, Johnson further discloses a receiver (fig. 2) according to claim 20 wherein Johnson further discloses the gain of the received radio signal is estimated from the calibrating signal when an output signal is measured at at least one output of the one or more amplifiers 50 (col 4, lines 5-12).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to

a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 13, 15-17 and 19, 25-28, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (US 4,031,469) in view of Logan et al (US 4,521,861).

Regarding claim 15, Johnson further discloses a calibration arrangement (fig. 2) according to claim 5, wherein Johnson didn't further disclose the calibrating signal represents a noise power (kTBF) from the one or more amplifiers that comprises: a known Boltzman constant (k); a known bandwith (B) of the noise power; a known noise figure of the noise power; a measured temperature (T) of the receiver. Logan et al further discloses the calibrating signal represents a noise power (kTBF) from the one or more amplifiers 50 that comprises: a known Boltzman constant (k); a known bandwith (B) of the noise power; a known noise figure of the noise power; a measured temperature (T) of the receiver. (col 8, lines 35-55; col 2, lines 62-67). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a thermal noise when there's to variations in temperature.

Regarding claim 16, Johnson further discloses a calibration arrangement (fig. 2) according to claim 5, wherein Johnson didn't further disclose an output from the last one of the one or more amplifiers in a chain is connected to an analog-digital-converter for converting analog signals into digital signals. Logan further discloses an output from the last one of the one or more amplifiers 96 in a chain is connected to an analog-digital-converter (104) for converting analog signals into digital signals (fig. 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ADC in order to sample and encode the analog signal to digital signal.

Regarding claim 17, Johnson further discloses a calibration arrangement (fig. 2) according to claim 15, wherein the gain of the radio signal at antenna is estimated from the calibrating signal including the noise power (kTBF) when an output signal is measured at at least one output of the one or more amplifiers 96 (col 3, lines 60-64).

Regarding claim 19, Johnson and Logan et al further discloses a calibration arrangement (fig. 2) according to claim 16 wherein Logan et al further discloses the gain of the radio signal is estimated from the calibrating signal when an output signal is measured after the analog-digital-converter 104 at calibrating circuit 100 (fig. 6).

Regarding claim 26, Johnson further discloses a receiver (fig. 2) according to claim 20 wherein Johnson didn't further disclose the calibrating signal represents a noise power (kTBF) from the one or more amplifiers that comprises: a known Boltzman constant (k); a known bandwidth (B) of the noise power; a known noise figure of the noise power; a measured temperature (T) of the receiver. Logan et al further discloses the calibrating signal represents a noise power (kTBF) from the one or more amplifiers 96 that comprises: a known Boltzman constant (k); a known bandwidth (B) of the noise power; a known noise figure of the noise power; a measured temperature (T) of the receiver (col 8, lines 35-55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a thermal noise when there's to variations in temperature.

Regarding claim 27, Johnson further discloses a receiver (fig. 2) according to claim 20 wherein Johnson didn't further disclose an output from the last one of the one or more amplifiers in a chain is connected to an analog-digital-converter for converting

analog signals into digital signals. Logan discloses an output from the last one of the one or more amplifiers (96) in a chain is connected to an analog-digital-converter (104) for converting analog signals into digital signals (fig. 6). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an ADC in order to sample and encode the analog signal to digital signal for more accurate measurement.

Regarding claim 28, Logan et al and Johnson further discloses a receiver (fig. 2) according to claim 26, wherein Logan et al further discloses said gain of the received radio signal at antenna is estimated from the calibrating signal including the noise power (kTBF) when an output signal is measured at at least one output of the one or more amplifiers 96 (col 3, lines 60-64).

Regarding claim 30, Johnson and Logan et al further discloses a receiver (fig. 2) according to claim 27 wherein Logan et al further discloses the gain (G) of the received radio signal at antenna is estimated from the calibrating signal when an output signal is measured at 100 after the analog-digital converter 104.

3. Claims 8-9 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 8, Johnson further discloses a calibration arrangement (fig. 2) according to claim 5 wherein the cited prior art fails to further disclose disconnecting the

one or more amplifiers 50 from the radio signal by disconnecting a power supply from at least one amplifier of the one or more amplifiers 50.

Regarding claim 9, Johnson further discloses a calibration arrangement (fig. 2) according to claim 6 wherein the cited prior art fails to further disclose the switching means is disconnecting the one or more amplifiers from the radio signal by disconnecting a power supply from at least one amplifier of the one or more amplifiers 50.

Regarding claim 24, Johnson discloses a receiver (fig. 2) according to claim 20, wherein the cited prior art fails to further disclose said switching means (64) is disconnecting said one or more amplifiers (50) from said radio signal by disconnecting a power supply from at least one amplifier of said one or more amplifiers.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana Le whose telephone number is (703) 308-5836. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.

Lana Le

September 8, 2003

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